

Precision Guided Mortar Munitions (PGMM)

Precision Guided Mortar Muniton (PGMM) is a 120mm mortar muniton that will provide the maneuver Commander with an organic capability for precision attack of critical point targets, to include those in urban environments or restrictive terrain, under all weather conditions to ranges beyond current 120mm mortar capabilities. PGMM is intended to incapacitate personnel in standard brick over block masonry structures, collapse earth and timber bunkers or incapacitate personnel inside, and defeat stationary lightly-armored vehicles or incapacitate personnel inside. PGMM will be compatible with all current and future mortar and mortar fire control systems. PGMM's terminal guidance will employ a man-in-the-loop laser designator to ensure precision engagement and to minimize collateral damage.

PGMM is an Acquisition Category II evolutionary development program. Increment I will provide the ability to engage and defeat/incapacitate point targets at ranges comparable to current 120mm mortar munitions: 7.2 km when fired from current mortar systems and 8.0 km when fired from the Future Combat System, non-line-of-sight (Mortar). Increment II is planned to increase the engagement range to 12 km. Increment III is planned to increase the engagement range to 15 km, adding the capabilities to defeat moving, lightly-armored vehicles, to destroy additional masonry targets, and to maneuver off of the gun-target line.

The PGMM program began as part of the Rapid Force Projection Initiative Advanced Technology Demonstration (ATD) in 1995. By 2001, the ATD produced a technology demonstrator 120mm mortar round that incorporated gyroscopic guidance with a laser seeker on a maneuverable airframe capable of a controlled-glide flight profile. Following the ATD in 2002, a Component Advanced Development (CAD) effort focused on the identification and selection of warhead and fuze technologies to support threshold lethality requirements.

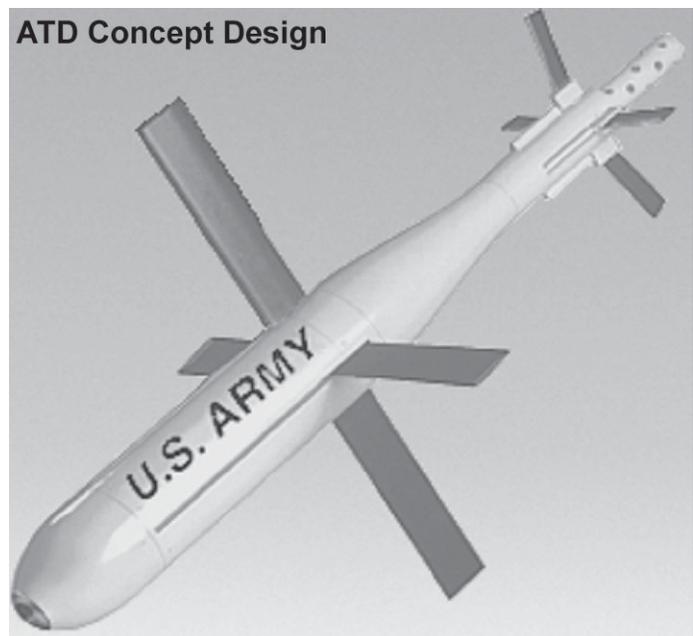
PGMM's Increment I entered its System Development and Demonstration (SDD) Phase with a conditional Milestone B decision in September 2003. The program has scheduled a Milestone C decision in 4QFY06, an IOT&E in 1QFY08, and a full-rate production (FRP) decision at the end of 3QFY08. The Army plans Milestone B decisions for Increments II and III in FY08 and FY10, respectively.

DOT&E placed PGMM under oversight in March 2003.

TEST & EVALULATION ACTIVITY

Testing in 2003 focused on fuze and warhead design and technology demonstration. Dynamic air-gun test firings against bunkers, masonry walls, and light-armor vehicle plating characterized the penetration capabilities of multiple muniton and fuze designs. Static test firings of the CAD design high explosive warhead provided fragmentation panel and overpressure data to support estimates of lethality. In February, the Army published a request for proposal for the PGMM SDD/low-rate initial production (LRIP) contract. The Army received five proposals and plans to select a contractor for SDD and LRIP and award the contract by the end of 2003.

DOT&E worked with the PGMM Integrated Product Team to develop an adequate Milestone B Test and Evaluation Master Plan (TEMP). This TEMP includes a comprehensive LFT&E strategy that integrates LFT&E with developmental and operational test events. A formal TEMP update will be done after SDD contractor selection.



Precision Guided Mortar Munitions will be compatible with all current and future mortar and mortar fire control systems.

ARMY PROGRAMS

TEST & EVALUATION ASSESSMENT

In ATD and CAD testing, guidance, airframe, control actuation, sensor (laser detector), and warhead/fuze subsystems demonstrated appropriate technology readiness levels for entry into the SDD phase of acquisition.

The Milestone B TEMP establishes appropriate LRIP and IOT&E entrance criteria and describes sufficient operational and live fire testing to support major program decisions. A Limited User Test will support an operational assessment before the Milestone C LRIP decision, and robust LFT&E and IOT&E programs will support the FRP decision. End-to-end firings of all-up rounds will constitute the principal source of live fire test data; there will be no dedicated LFT&E events. The TEMP update after the contractor selection will provide details of SDD contractor and government developmental test plans and may modify portions of live fire and operational test plans. This update will also include a comprehensive and executable Reliability Growth Program.

Because soldiers have not previously employed laser designators for the terminal guidance of mortar munitions, DOT&E's system evaluation will include an assessment of the effectiveness of the tactics, techniques, and procedures for the employment of PGMM, to include limitations on laser designator employment.

Since the PGMM ORD requires the minimization of collateral damage, as compared to that caused by other available munitions, DOT&E will require a detailed plan to assess this capability.

The January 2003 PGMM Acquisition Strategy and Acquisition Plan stated that the Army plans to award an FRP contract through full and open competition. Should a contractor other than the SDD/LRIP contractor be selected for this award, additional testing will be required for an adequate assessment of operational effectiveness and suitability.